

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A traffic information collecting and providing system utilizing a PCS network, comprising:

a PCS terminal for detecting and storing subscriber location information only once in each of a plurality of service areas having respective base transceiver stations, and transmitting the detected and stored subscriber location information to one of the base transceiver stations, wherein the base transceiver stations are installed on roads of specific areas requiring traffic information and are capable of receiving location information from the PCS terminal;

a PCS network for transmitting the subscriber location information received from said one base transceiver station and detected by the PCS terminal; and

a traffic information center for checking a traffic volume and congestion conditions by processing and statistically analyzing the subscriber location information transmitted through the PCS network, wherein the PCS terminal does not transmit the subscriber location information until a predetermined number of times of detection is reached,

wherein the predetermined number of times of detection is set according to a parameter value output from at least one of the base transceiver stations, and wherein said one

base transceiver station is disposed at a service area through which the PCS terminal passes for a first time among the base transceiver stations.

2. (Previously Presented) The method according to claim 1, wherein the subscriber location information includes the location of a subscriber and a time at which the location is measured.

3-5 (Canceled)

6. (Previously Presented) The method according to claim 1, wherein the PCS terminal transmits all location information detected in the service areas at once when the predetermined number of times of detection of subscriber location information is reached.

7. (Currently Amended) A traffic information collecting and providing method utilizing a PCS network, comprising:

outputting a control signal from at least one of a plurality of base transceiver stations installed on roads of specific areas requiring traffic information to a PCS terminal, which detects and stores subscriber location information only once in each of a plurality of service areas respectively including the base transceiver stations;

collecting the subscriber location information from the PCS terminal;

transmitting the collected subscriber location information to the PCS network a
traffic information center; and

processing the subscriber location information into a traffic information by
statistically analyzing the subscriber location information transmitted through the PCS network
by the traffic information center, wherein the control signal is a parameter value for controlling a
number of times the PCS terminal detects the subscriber location information.

8. (Canceled)

9. (Currently Amended) A traffic information collecting and providing method
utilizing a PCS network, comprising:

outputting a control signal from at least one of a plurality of base transceiver
stations installed on roads of specific areas requiring traffic information to a PCS terminal, which
detects and stores subscriber location information only once in each of a plurality of service
areas respectively including the base transceiver stations;

collecting the subscriber location information from the PCS terminal;

transmitting the collected subscriber location information to the PCS network a
traffic information center; and

processing the subscriber location information into a traffic information by
statistically analyzing the subscriber location information transmitted through the PCS network
by the traffic information center, wherein said at least one base transceiver station is one disposed

at a service area through which the PCS terminal passes for a first time among the plurality of base transceiver stations.

10. (Previously Presented) The method according to claim 7, wherein the base transceiver station is plurally installed, and each base transceiver station is disposed on roads of specific areas requiring traffic information.

11. (Previously Presented) A traffic information collecting and providing method utilizing a PCS network, comprising:

outputting a control signal from at least one of a plurality of base transceiver stations installed on roads of specific areas requiring traffic information to a PCS terminal, which detects and stores subscriber location information in each of a plurality of service areas respectively including the base transceiver stations;

collecting the subscriber location information from the PCS terminal;

transmitting the collected subscriber location information to the PCS network;

and

processing the subscriber location information into a traffic information by statistically analyzing the subscriber location information transmitted through the PCS network, wherein the PCS terminal detects subscriber location information only once in each of the service areas including a respective one of the base transceiver stations.

12. (Previously Presented) The method according to claim 7, wherein the subscriber location information includes the location of the PCS terminal and a time at which the location is measured.

13. (Previously Presented) The method according to claim 7, wherein the PCS terminal does not transmit the detected user location information until the number of times of detection is reached.

14. (Previously Presented) The method according to claim 7, wherein the PCS terminal transmits all location information detected in the services areas at once when the number of times of detection is reached.

15. (Previously Presented) The method according to claim 7, wherein the base transceiver stations provide general mobile communication call services and traffic information call services.

16. (Previously Presented) The method according to claim 7, wherein the PCS terminal has general mobile communication service functions and traffic information service functions

17. (Previously Presented) A traffic information collecting and providing method utilizing a PCS network, comprising:

outputting a control signal from at least one of a plurality of base transceiver stations installed on roads of specific areas requiring traffic information to a PCS terminal, which detects and stores subscriber location information only once in each of a plurality of service areas respectively including the base transceiver stations;

collecting the subscriber location information from the PCS terminal;

transmitting the collected subscriber location information to the PCS network;

and

processing the subscriber location information into a traffic information by statistically analyzing the subscriber location information transmitted through the PCS network, wherein processing location information into a traffic information comprises:

judging whether a subscriber of the PCS terminal is walking or in a running car, by comparing movement distance between measured intervals with respect to time when location information is measured; and

checking a traffic volume and congestion conditions of a specific interval by comparing the movement distance between measured intervals with a reference value, if the subscriber is in a running car.

18. (Previously Presented) The method according to claim 17, wherein if it is judged that the subscriber is not in a running car, or the movement distance between measured intervals is smaller than the reference value, the corresponding location information is removed.

19. (Currently Amended) A method for determining vehicle traffic, comprising:
receiving location information from a mobile terminal;
judging whether a subscriber of the mobile terminal is walking or in a moving vehicle, by comparing a movement distance between measured intervals with respect to time when location information is measured;
checking a traffic volume and congestion conditions of a specific interval by comparing the movement distance between measured intervals with a reference value, if the subscriber is in a moving vehicle;
~~detecting whether the mobile terminal is in a moving vehicle; and~~
if the subscriber of the mobile terminal is judged to be in a moving vehicle, determining traffic conditions along a route based on the location information; and
if the subscriber of the mobile terminal is judged not to be in a moving vehicle, or the movement distance between measured intervals is smaller than the reference value, removing the corresponding location information.

20. (Previously Presented) The method of claim 19, further comprising:
transmitting information indicative of the traffic conditions to another mobile terminal.
21. (Previously Presented) The method of claim 20, wherein the traffic condition information is transmitted to the other mobile terminal in response to a request signal from the other mobile terminal.
22. (Previously Presented) The method of claim 19, wherein the location information includes:
locations of the mobile terminal along the route; and
times when the locations were detected.
23. (Previously Presented) The method of claim 22, wherein each of the locations is included within a respective one of a plurality of services areas of a mobile communication system.
24. (Previously Presented) The method of claim 23, wherein only one location for each of the service areas is received.

25. (Previously Presented) The method of claim 22, wherein the locations of the mobile terminal are received in a single transmission.

26. (Previously Presented) The method of claim 25, wherein the single transmission is received after detection of a predetermined number of locations of the mobile terminal.

27. (Previously Presented) The method of claim 26, wherein the predetermined number is indicated by a parameter transmitted to the mobile terminal.

28. (Previously Presented) The method of claim 27, wherein the parameter is varied based on at least one of road conditions and traffic congestion along the route.

29-30. (Canceled)

31. (Previously Presented) The method of claim 19, wherein the mobile terminal performs mobile communication service functions and traffic information service functions.

32. (Previously Presented) The method of claim 19, wherein the mobile terminal is a PCS terminal.

33. (Previously Presented) The method of claim 19, wherein the location information is received from the mobile terminal through base transceiver stations located at predetermined positions along the route.

34. (Currently Amended) A system for determining vehicle traffic, comprising:
a network block which receives location information from a mobile terminal;
a detector which detects whether the mobile terminal is in a moving vehicle; and
a processor which, if the mobile terminal is in a moving vehicle, determines traffic conditions along a route based on the location information,

wherein the processor judges whether a subscriber of the mobile terminal is walking or in a moving vehicle, by comparing a movement distance between measured intervals with respect to time when location information is measured, checks a traffic volume and congestion conditions of a specific interval by comparing the movement distance between measured intervals with a reference value, if the subscriber is judged to be in a moving vehicle, and if the subscriber is judged not to be in a moving vehicle, or the movement distance between measured intervals is smaller than the reference value, removing the corresponding location information.

35. (Previously Presented) The system of claim 34, wherein the network block includes a plurality of base transceiver stations, each in a respective one of a plurality of service areas of a mobile communication system for receiving location data from the mobile terminal.

36. (Currently Amended) The system of claim 35, wherein a first base transceiver station transmits a parameter to the mobile terminal indicating a number of times location detection is to be performed, and wherein a second base transceiver station receives the location information from the mobile terminal after location detection has been performed said number of times.

37. (Previously Presented) The system of claim 36, further comprising:
transmitting information to change the parameter based on at least one of road conditions and traffic congestion along the route.

38. (Previously Presented) The system of claim 35, wherein the location information includes only one location of the mobile terminal in each of the service areas.

39. (Previously Presented) The system of claim 34, wherein the network block transmits information indicative of the traffic conditions to another mobile terminal.

40. (Previously Presented) The system of claim 39, wherein the network block transmits the traffic condition information to the other mobile terminal in response to a request signal from the other mobile terminal.

41. (Previously Presented) The system of claim 34, wherein the location information includes:

locations of the mobile terminal along the route; and
times when the locations were detected.

42. (Previously Presented) The system of claim 41, wherein each of the locations is included within a respective one of a plurality of services areas of a mobile communication system.

43. (Previously Presented) The system of claim 42, wherein the network block receives only one location for each of the service areas.

44. (Previously Presented) The system of claim 41, wherein the network block receives locations of the mobile terminal in a single transmission.

45. (Previously Presented) The system of claim 44, wherein the network block receives the single transmission after detection of a predetermined number of locations of the mobile terminal.

46. (Canceled)

47. (Previously Presented) The system of claim 34, wherein the network block is included in a PCS system.

48. (New) A traffic information collecting and providing system utilizing a mobile communication network, comprising:

a terminal for detecting and storing subscriber's location information only once by service areas of each base transceiver station and transmitting the subscriber's location information to the base transceiver station;

base transceiver stations installed on roads of specific areas requiring traffic information and receiving the subscriber's location information from the terminal;

a mobile communication network for receiving the subscriber's location information from the base transceiver station and transmitting the received subscriber's location information; and

a traffic information center for receiving the subscriber's location information from the mobile communication network and checking a traffic volume and congestion conditions by processing and statistically analyzing the received subscriber's location information.

49. (New) A traffic information collecting and providing method utilizing a mobile communication network, comprising:

collecting subscriber's location information from terminals when the terminal generates subscriber's location information according to a control signal received from base transceiver stations; and

transmitting the collected subscriber location information to a traffic information center processing the collected subscriber's location information into a traffic information by statistically analyzing the collected subscriber location information, wherein the control signal is a parameter value for controlling a number of times for detecting subscriber's location information.

50. (New) The method according to claim 49, wherein the terminal detects and stores subscriber's location information only once in each of a plurality of service areas respectively including the base transceiver stations.

51. (New) The method according to claim 49, wherein the base transceiver stations are installed on roads of specific areas requiring traffic information.

52. (New) A traffic information collecting and providing method utilizing a PCS network, comprising:

transmitting a control signal of base transceiver stations installed on roads of specific areas requiring traffic information to a PCS terminal, which detects and stores subscriber location information only once in each of a plurality of service areas respectively including the base transceiver stations;

collecting subscriber location information from the PCS terminal; and

transmitting the collected subscriber location information to a traffic information center, in order to process the subscriber location information into a traffic information by statistically analyzing the subscriber location information.

53. (New) A method for processing a subscriber location information collected by PCS network, comprising:

receiving a subscriber location information generated by the PCS terminal through the PCS network; and

processing the received subscriber location information into a traffic information by statistically analyzing the subscriber location information, wherein processing the received subscriber location information into a traffic information comprises:

comparing movement distance between measured intervals with respect to time when location information is measured; and

checking the traffic volume and congestion conditions of a specific interval by comparing the movement distance between measured intervals with a reference value.